Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1 – 7 (Cancelled).

8. (Currently Amended) A method of initialization for a multitone system using a hybrid time division duplex (TDD) and frequency division duplex (FDD) system with a hyperframe structure, comprising:

> comparing ~~upstream and downstream~~ a first direction and a second direction
> > data rates for a two-band duplex to threshold data rates; and

> when said data rates fail to meet said threshold data rates, comparing data rates
> > for a hybrid duplex to said threshold data rates, wherein said hybrid duplex
> > uses hyperframes with structure:

> > > wherein a first set of symbols~~, referred to as~~are a plurality of type 1
> > > > symbols, for transmission in ~~a~~said first direction in a first set
> > > > of subchannels-and transmission in ~~a~~said second direction in
> > > > a second set of subchannels where said first and said
> > > > second directions differ and said first set of subchannels and
> > > > second set~~s~~ of subchannels are different;~~and~~

> > > wherein a second set of symbols~~, referred to as~~are a plurality of
> > > > type 2 symbols, where transmission is only in the first
> > > > direction in the first set of subchannels; and

> > > wherein a third set of symbols~~, referred to as~~ are a plurality of type
> > > > 3 symbols, where transmission is only in the first direction in
> > > > subchannels different from that of the set of subchannels
> > > > used for type 2 symbols.

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9. (Currently Amended) ~~An article of manufacture in the form of~~A computer-readable medium encoded with a hyperframe for use in a communication system including a plurality of processor circuitry operable to provide a discrete multitone system, said ~~article of manufacture~~ hyperframe comprising:

a first set of symbols~~, manufactured by the plurality of processor circuitry from the data bits input, the first set of symbols referred to as~~is a type 1 ~~symbols~~frame comprising type 1 symbols, where transmission is in a first direction using a first direction set of subchannels and second direction using a second direction set of subchannels;

a second set of symbols~~, manufactured by the plurality of processor circuitry from the data bits input, the second set of symbols referred to as~~is a type 2 ~~symbols~~frame comprising type 2 symbols, where transmission is only in the first direction using the first direction set of subchannels; and

a third set of symbols~~, manufactured by the plurality of processor circuitry from the data bits input, the third set of symbols referred to as~~is a type 3 ~~symbols~~frame comprising type 3 symbols, where transmission is only in the ~~first~~ direction using subchannels different from that of the set of subchannels used for the type 2 symbols,

wherein the total of symbols is N symbols comprised of n1 type 1 symbols, n2 type 2 symbols and n3 type 3 symbols, where n1 + n2 + n3 = N.

10. (Currently Amended) The ~~article of manufacture~~computer-readable medium encoded with a hyperframe of claim 9, wherein the set of subchannels used by the type 2 symbols for transmission in the first direction does not include the set of subchannels used for transmission in the second direction by the type 1 symbols.

11. (Currently Amended) The ~~article of manufacture~~computer-readable medium encoded with a hyperframe of claim 9, wherein the set of subchannels used by the type 3 symbols for transmission in the first direction includes the set of subchannels used for transmission in the second direction by the type 1 symbols.

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12. (Currently Amended) The ~~article of manufacture~~computer-readable medium encoded with a hyperframe of claim 9, wherein the N symbols are ordered such that there are n1 type 1 symbols, followed by 1 type 2 symbol, followed by n3 type 3 symbols, followed by 1 type 2 symbol.

13. (Currently) Amended) The ~~article of manufacture~~computer-readable medium encoded with a hyperframe, wherein the first direction is downstream, from a central office, and the second direction is upstream, to the central office.

14. (Currently Amended). A method of initializing a discrete multitone system with a hyperframe in a communication circuitry including a signal processor, comprising:

determining the allowed set of power spectral density (PSD) masks for a first direction and a second directions of a type 1, type 2 and type 3 symbols;

determining a target data rate for the first direction and the second directions;

including type 1 and type 3 symbols in the signal-to noise (SNR) measurement phase;

performing a bit loading for the type 1, type 2 and type 3 symbols to determine the data rates supported in the first direction and the second directions for each type of symbol; and

signal processor ~~manufacturing~~encoding the hyperframe, said ~~manufacturing~~encoding comprising:

choosing all type 1 symbols if the type 1 symbol is able to meet the target data rates for the first direction and the second directions; and

choosing a mix of type 1, type 2 and type 3 symbols to most closely meet the target data rates for the first direction and the second directions if all type 1 symbols are unable to meet the target data rate.

15. (New) The method of claim 8, wherein the first direction is downstream, from a central office, and the second direction is upstream, to the central office.